

REMARKS

Claims 1 to 61 are pending. In response to the restriction requirement, Applicants elect Group I, claims 1 to 29, for prosecution in the subject application. By the present amendment, claims 2 and 9 have been canceled without prejudice. Applicants maintain the right to prosecute the canceled claims in any related application claiming the benefit of priority of the subject application. New claims 62 to 64, which depend from claim 1, have been added. Accordingly, upon entry of the amendment, claims 1, 3, 4 to 8, 10 to 29 and 62 to 64 are under consideration.

Regarding the Amendments

The amendments to claims 1, 3 to 8 and 10 to 23 are supported throughout the specification or were made to address informalities. In particular, the amendment to claim 1 to recite "monoclonal" and "human" is supported, for example, by originally filed claims 2 and 9. The amendment to delete the recitation of "isolated," "anti-CD40" and "modulates an activity of CD40" is supported, for example, at page 10, lines 1-2. The amendment to claim 3, to depend from claim 1, was made in view of the cancellation of claim 2. The amendment to claims 4 to 8 and 10 to 23 to delete the recitation of "anti-CD40" was made to maintain consistent language with amended claim 1. Thus, as the amendments are supported by the specification or were made to address informalities, no new matter is added and entry thereof is respectfully requested.

Regarding the New Claims

New claims 62 to 64 are supported throughout the specification. In particular, claim 62 is supported, for example, at page 42, lines 14-18, and Figure 3; claim 63 is supported, for example, at page 42, lines 19-25, and Figure 4B; and claim 64 is supported, for example, at page 43, lines 6-8. Thus, as new claims 62 to 64 are supported by the specification, no new matter is added and entry thereof is respectfully requested.

Regarding the Drawings

In response to the request in the Office Action for formal drawings, submitted herewith are formal drawings prepared in accordance with form PTO-948. Applicants respectfully request acceptance of the drawings.

CONCLUSION


Applicants respectfully request entry of the present response and amendment and substantive examination of the application. If the Examiner would like to discuss any of the issues raised in the response and amendment, Applicant's representative can be reached at (858) 509-4065.

Please charge any additional fees, or make any credits, to Deposit Account No. 03-3975.

Respectfully submitted,

Date: _____

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Clean Claims Upon entry of the Amendment

- AA1
1. A human monoclonal antibody or fragment thereof that specifically binds to human CD40.
- AA5 Sub B1
3. The human antibody of claim 2, wherein the antibody is produced by a hybridoma cell line or subclones thereof, and wherein the antibody is denoted as no. 11 or 72, or the hybridoma is denoted as F1-102, F5-152, F2-103, F5-77, F5-157 or F4-465.
4. The human antibody of claim 1, wherein the antibody has the CD40 binding specificity of the antibody denoted as no. 11 or 72, or the antibody produced by the hybridoma denoted as F1-102, F5-152, F2-103, F5-77, F5-157 or F4-465.
5. The human antibody of claim 1, wherein the antibody has a CD40 modulating activity of the antibody denoted as no. 11 or 72, or the antibody produced by the hybridoma denoted as F1-102, F5-152, F2-103, F5-77, F5-157 or F4-465.
6. The human antibody fragment of claim 1, wherein the fragment comprises an scFv, Fab, Fab', or F(ab')₂ fragment.
7. The human antibody fragment of claim 6, wherein the fragment comprises a fragment of the antibody denoted as no. 11 or 72, or the antibody produced by the hybridoma denoted as F1-102, F5-152, F2-103, F5-77, F5-157 or F4-465.
8. The human antibody of claim 1, wherein the antibody is detectably labeled.
10. The human antibody of claim 1, wherein the antibody decreases binding of a CD40 ligand to CD40.
11. The human antibody of claim 1, wherein the antibody increases binding of a CD40 ligand to CD40.
12. The human antibody of claim 1, wherein the antibody decreases a CD40 activity.
13. The human antibody of claim 12, wherein the antibody contains a lambda light chain sequence.
14. The human antibody of claim 12, wherein the antibody decreases proliferation of a cell expressing CD40.
15. The human antibody of claim 14, wherein the cell is a B-cell.
16. The human antibody of claim 12, wherein the antibody decreases expression of a protein.
17. The human anti-CD40 antibody of claim 16, wherein the protein comprises CD95, CD80 or CD86.

18. The human antibody of claim 1, wherein the antibody increases a CD40 activity.
19. The human antibody of claim 18, wherein the antibody increases proliferation of a cell expressing CD40.
20. The human antibody of claim 19, wherein the cell is a B-cell.
21. The human antibody of claim 18, wherein the antibody increases expression of a protein.
22. The human antibody of claim 21, wherein the protein comprises CD95, CD80 or CD86.
23. The human antibody of claim 1, further comprising a pharmaceutical formulation.
24. A host cell that expresses the antibody of claim 1.
25. A nucleic acid that encodes the antibody of claim 1.
26. A host cell containing the nucleic acid of claim 25.
27. A method of producing a human CD40 antibody that modulates an activity of CD40 comprising:
 - (a) administering CD40 or an immunogenic fragment thereof to a mouse capable of expressing human immunoglobulin;
 - (b) screening the administered mouse for expression of a human CD40 antibody;
 - (c) selecting a mouse that produces a human CD40 antibody;
 - (d) isolating an antibody from the mouse that produces a human CD40 antibody; and
 - (e) determining whether the human CD40 antibody modulates an activity of CD40 thereby producing a human CD40 antibody that modulates an activity of CD40.
28. A method of producing a human CD40 monoclonal antibody that modulates an activity of CD40; comprising:
 - (a) administering human CD40 or an immunogenic fragment thereof to a mouse capable of expressing human immunoglobulin;
 - (b) isolating spleen cells from the mouse that produces a human CD40 antibody;
 - (c) fusing the spleen cells with a myeloma cell to produce a hybridoma; and
 - (d) screening the hybridoma for expression of a human CD40 antibody that modulates an activity of CD40 thereby producing a human monoclonal CD40 antibody that modulates an activity of CD40.
29. A monoclonal antibody isolated from a hybridoma produced by the method of claim 28.

62. The human antibody or fragment of claim 1, wherein the antibody inhibits CD95 expression of Ramos B cells mediated by CD40 ligand in vitro, in the condition of 1 μ g/ml of soluble CD40 ligand and 1 μ g/ml of the antibody.
63. The human antibody or fragment of claim 1, wherein the antibody inhibits human B-cell proliferation mediated by CD40 ligand in vitro, in the condition of 1 μ g/ml of soluble CD40 ligand and 10 nanogram/ml of the antibody.
64. The human antibody or fragment of claim 62 or 63, wherein the antibody has a Kd value of 0.8 to 4 nM, as determined by BiaCore[®] analysis.